ABSTRACT

A system and method for improved testing of a software build is provided. The system and method automatically track differences between software builds by scanning the binaries of a software product to automatically discover its classes. The system and method then build a detailed dictionary that captures static and dynamic information of that build, including class dependencies. A comparison may be made with another build, so that the present invention may automatically execute selective tests on any types, and their dependencies, that have had a structural or behavioral modification since the last build. Testers may load a set of constructors for any specific types to further increase coverage of types (or classes) tested. The present invention may also provide detailed reports that may be used to drive future testing work and target specific areas of the code for additional testing. The system and method may further provide code generation from intermediate code to specified targets to aid in reproducing and fixing bugs.